User Manual

FnIO S-Series

Power Module

List of Revisions

No.	Date	Version	Revision
1	2007.12 .15	1.00	created

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1. Product Specifications

1) Environment Specifications

Item		Specifications	Remarks
Temperature	Operating	-20℃ to +60℃ (-4°F to 140°F)	
	Storage	-40℃ to +85℃ (-40°F to 185°F)	
Humidity	Operating	5 to 95% RH (Non-condensing)	
	Storage	5 to 95% RH (Non-condensing)	
Operating Altitude		2,000m	
Mounting		DIN Rail	

2) General Specifications

Item		Specifications	Remarks
Wiring I/O Cable		Max. 2.0m^2, AWG 14	
Shock Operating		10G	
Shock Non-Operating		30G	
Vibration/Shock Resistance	Displacement	0.012 Inch p-p from 10~57Hz	
	Acceleration	2G's from 57~500Hz	
	Sweep Rate	1 octave per Minute	
	Axes to test	X, Y, Z	
	Frequency Sweep per Axis	10	
EMC		Confirms to EN-61000-6-2	
EMI		Confirms to EN-61000-6-4	
Installation Pos./ Protect. Class		Variable / IP20	
Certifications		UL, cUL, CE	

2. Expansion Power Module

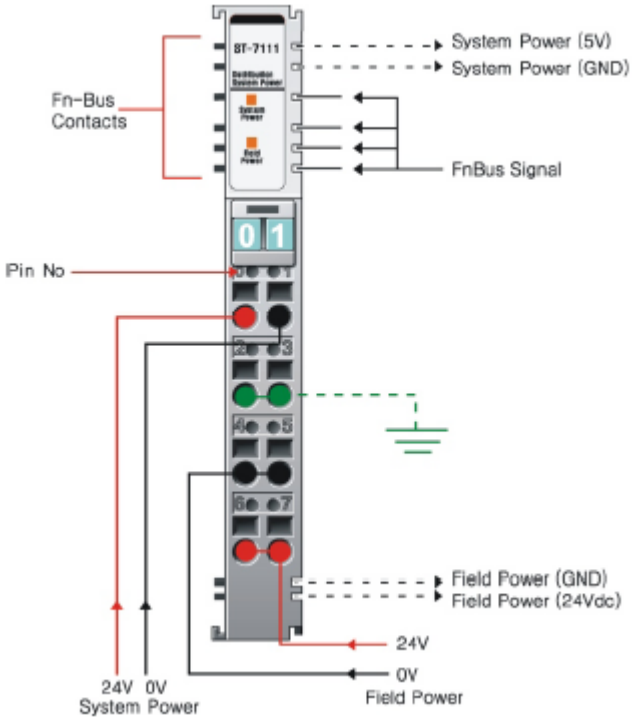
Description

- ST-7111 is Power supply Module for expansion.
- ST-7241 is Power Distributor Module.
- ST-7111 has all 2 LEDs for Status indication. One indicates Status of System Power, the other one indicates status of System Power.
- You can change the supply power of Field Power by using ST-7241.

1) ST-7111

- Expansion Power Supply Terminal Type (Input 24VDC, Output 1.0A/5VDC)

◆ **Module View**



◆ Specification

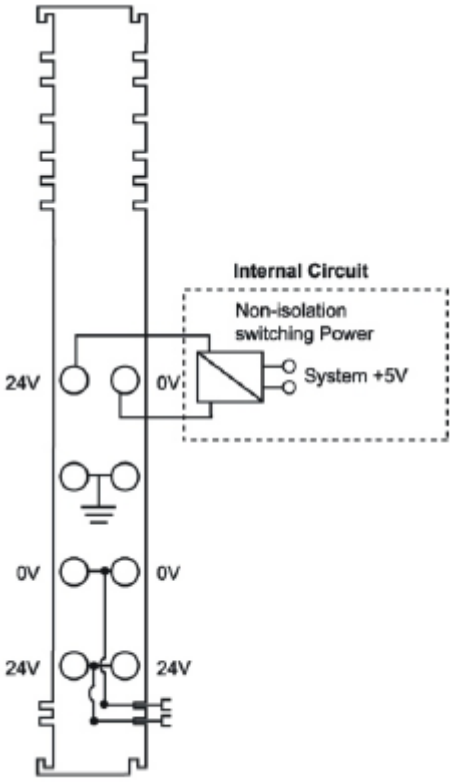
Input Specification	
System Input Voltage rage	11Vdc to 28.8Vdc
System Power Input Voltage	Normal 24Vdc
Field Power Input Voltage	Normal 24Vdc(±20%)
Fn-Bus Output Voltage	Max. 5Vdc, 1A
Field Power Contact Current	Max. 10A
Output Specification	
Wiring	I/O Cable Max. 2.0㎟(AWG 14)
Weight	70g
Size	12mm × 99mm × 70mm

◆ Status LED Description

- Expansion Module Status LED

Power	LED State	Indicates
OFF	OFF	Inactive(Normal)
ON	Green	Active(Normal)

◆ Module Wire Diagram

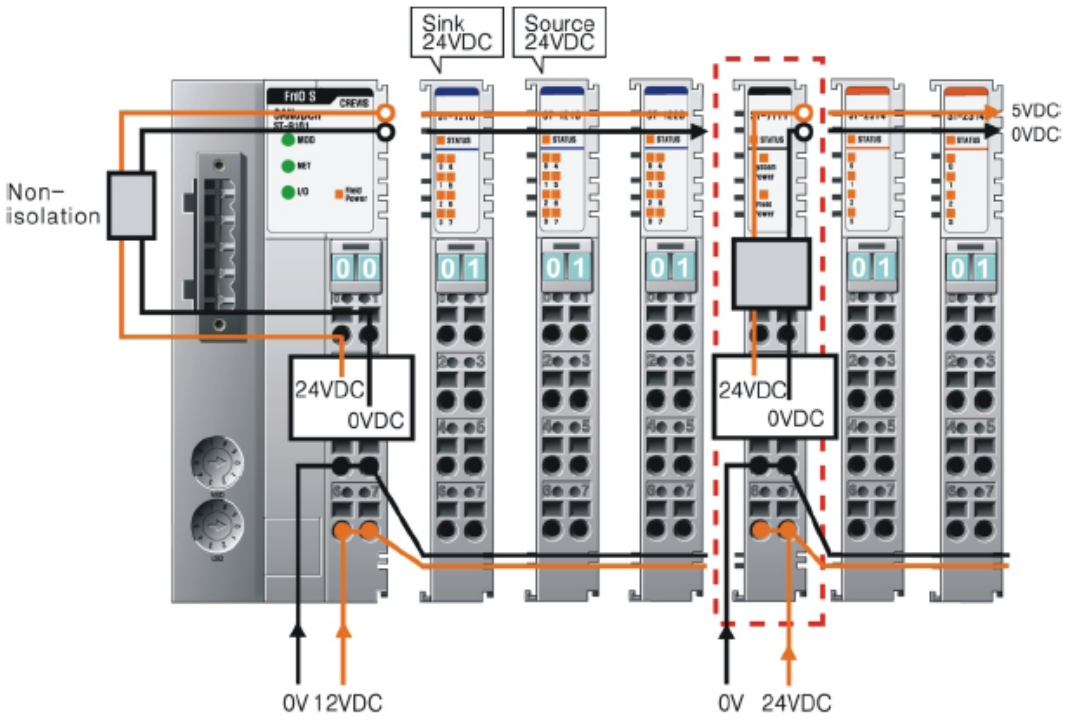


- Wiring Description

Pin No.	Description	Pin No.	Description
0	System Power(+24V)	1	System Power(0V)
2	Field Ground	3	Field Ground
4	Field Power(0V)	5	Field Power(0V)
6	Field Power (+24V)	7	Field Power (+24V)

◆ **Example**

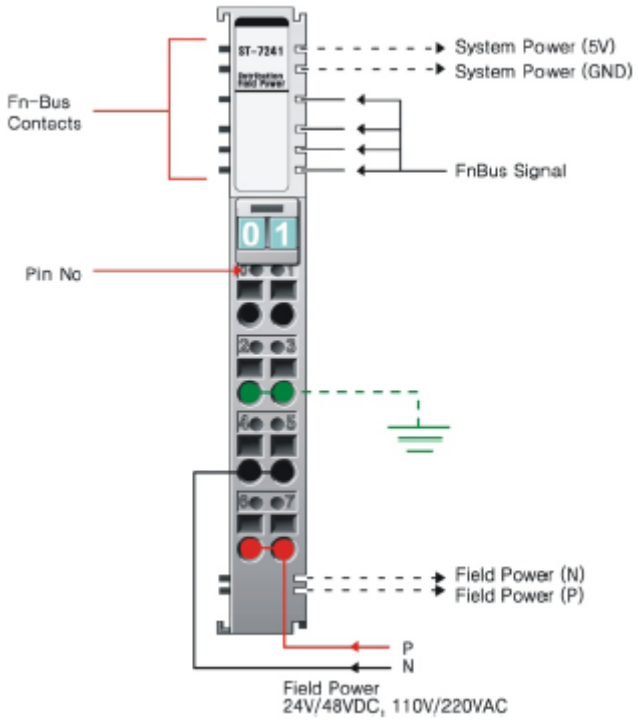
When you are using a FnIO setup that requires more than 1.5A for system power(+5V) or 10A of field power, you will need to add a ST-7111 expansion power module to ensure that enough power will be available to all the ST Module.



2) ST-7241

- Expansion Field Power Distributor Terminal Type
(Arbitrary 5VDC, 24VDC, 48VDC, 110VAC, 220VAC)

◆ Module View



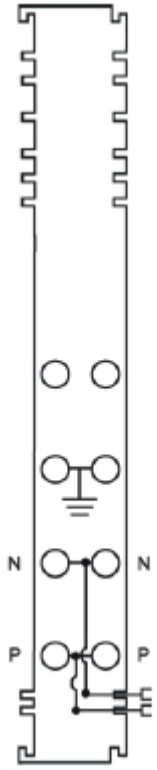
◆ Specification

Input Specification	
Field Power Voltage	Arbitrary
Indicator	Non Indicate
Field Power Contact Current	Max. 10A
Output Specification	
Wiring	I/O Cable Max. 2.0㎟(AWG 14)
Weight	70g
Size	12mm × 99mm × 70mm

- Wiring Description

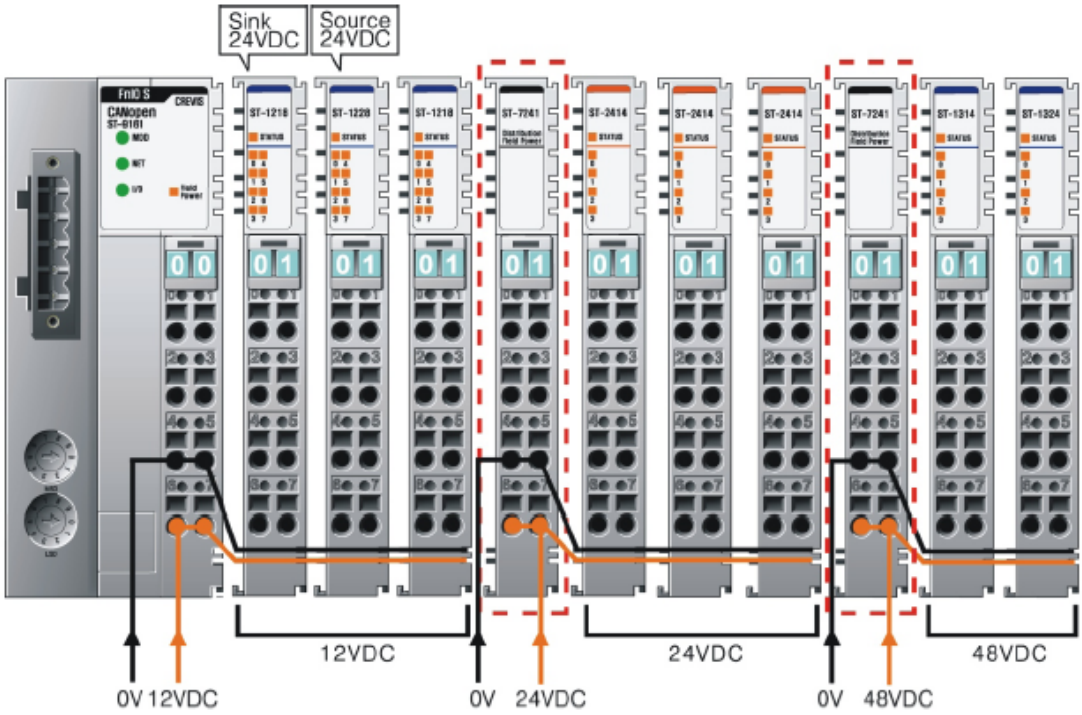
Pin No.	Description	Pin No.	Description
0	NC	1	NC
2	Field Ground	3	Field Ground
4	Field Power arbitrary(N)	5	Field Power arbitrary(N)
6	Field Power arbitrary(P)	7	Field Power arbitrary(P)

◆ Module Wire Diagram



◆ **Example**

When you have a FnIO setup and need to use with different Field Power Voltage, you can use the ST-7241 to change the distributed voltage from 12Vdc to 24Vdc to 48Vdc, or from 110Vac to 220Vac as below



3. Potential Distributor Module

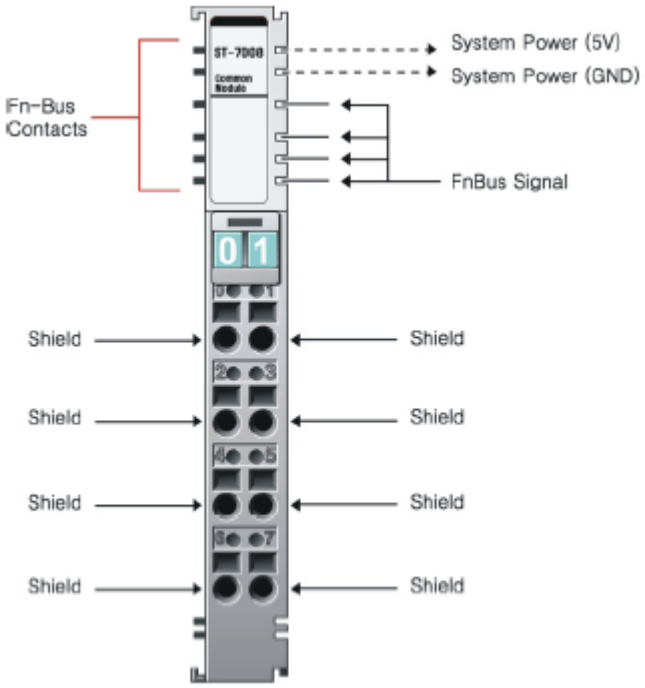
Description

- The potential Distributor Modules are for Shield, 0V, 24V Common.
- When an external equipment adjacent to FnIO Module needs 24V voltage, you can set up and use it. For wiring, you can use this module to connect without using external Common terminal
- I/O Cable Max. 2.0㎟(AWG 14) can be used for Wiring .

1) ST-7008

- Potential Distributor for shield Terminal Type

◆ **Module View**



◆ **Specification**

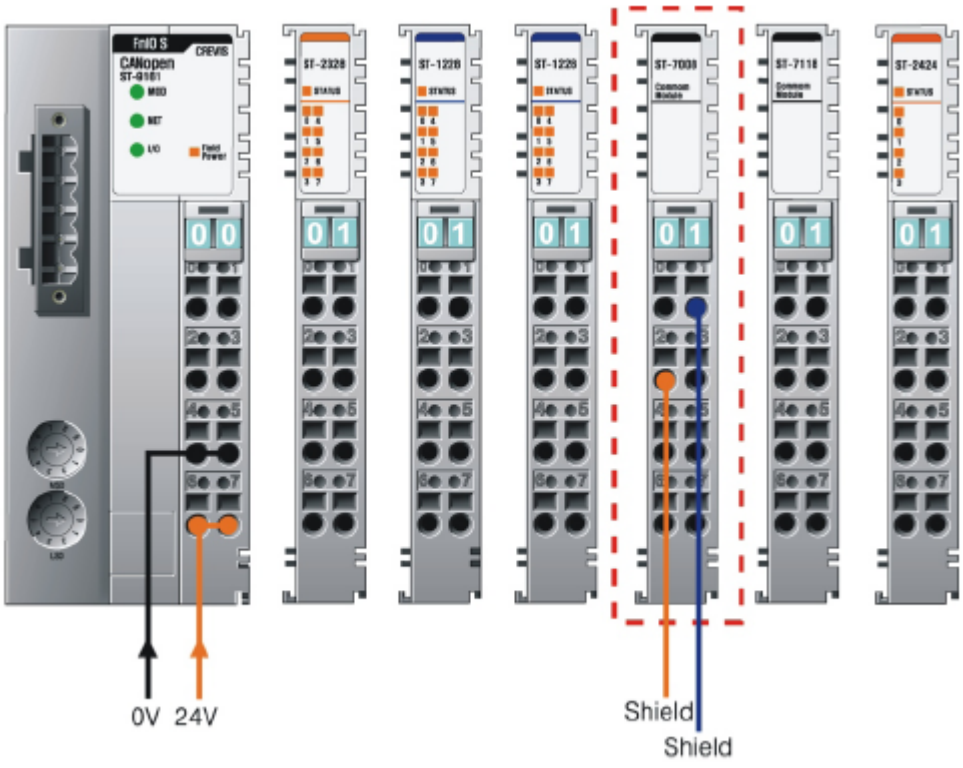
Input Specification	
Field Power Voltage	Shield signal
Indicator	Non Indicate
Field Power Contact Current	Max. 10A
Output Specification	
Power Dissipation	Expansion Power Distributor
Wiring	I/O Cable Max. 2.0㎟(AWG 14)
Weight	65g
Size	12mm × 99mm × 70mm

- Wiring Description

Pin No.	Description	Pin No.	Description
0	Shield	1	Shield
2	Shield	3	Shield
4	Shield	5	Shield
6	Shield	7	Shield

◆ **Example**

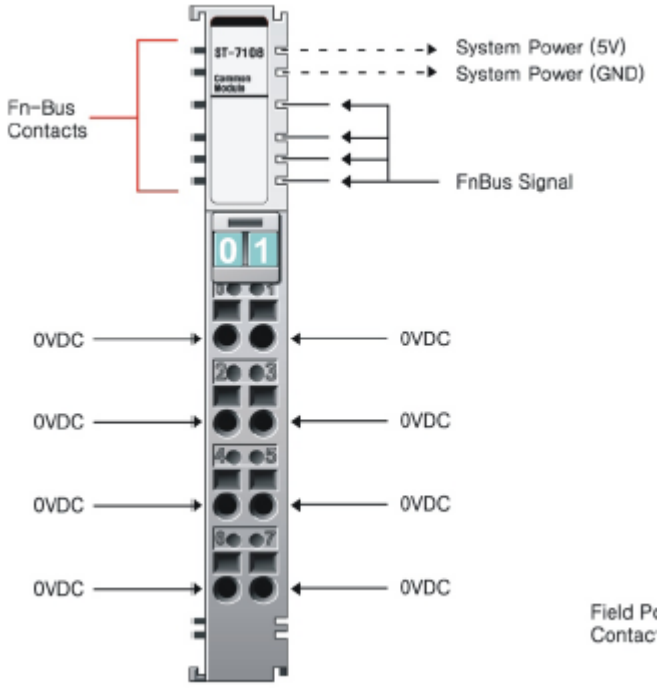
The ST-7008 provides Shield



2) ST-7108

- Potential Distributor for 0V Terminal Type

◆ **Module View**



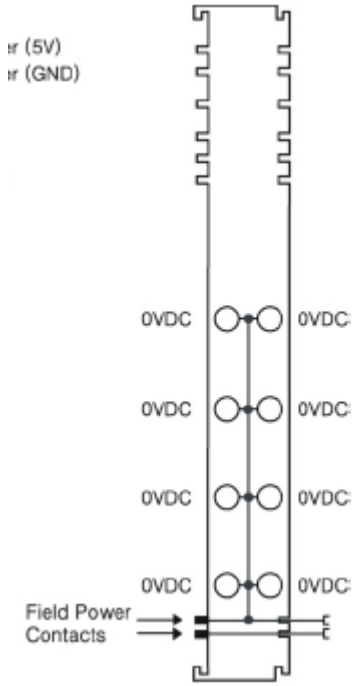
◆ **Specification**

Input Specification	
Field Power Voltage	0V
Indicator	Non Indicate
Field Power Contact Current	Max. 10A
Output Specification	
Power Dissipation	Expansion Power Distributor
Wiring	I/O Cable Max. 2.0㎟(AWG 14)
Weight	65g
Size	12mm × 99mm × 70mm

- Wiring Description

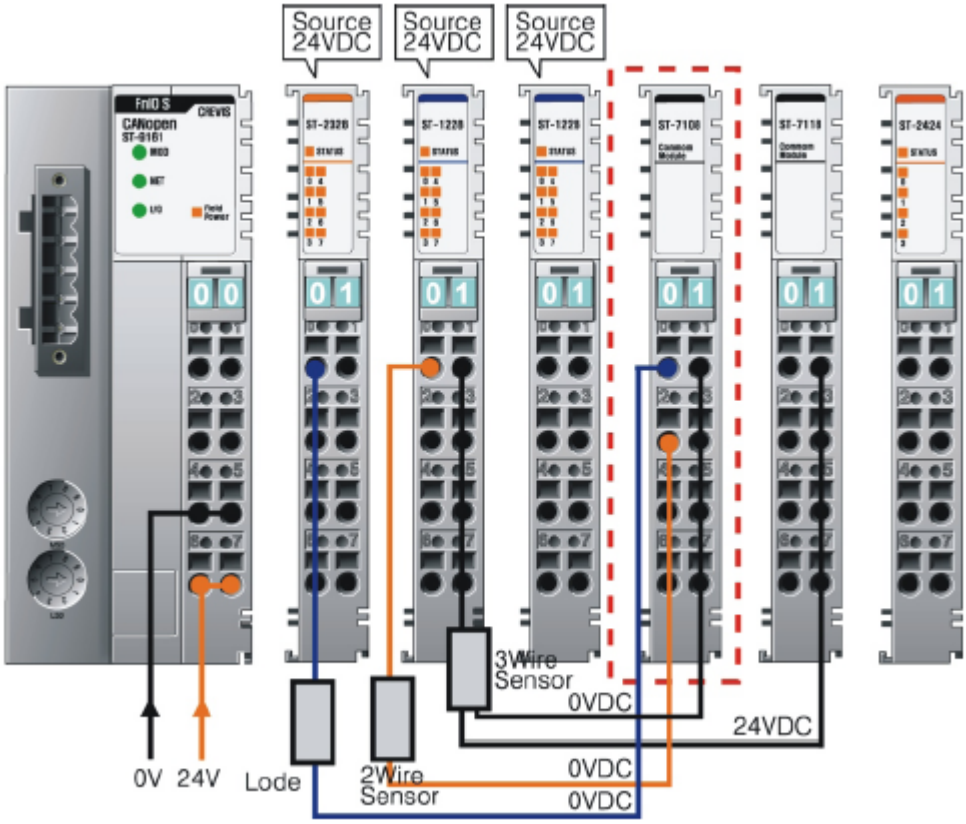
Pin No.	Description	Pin No.	Description
0	0VDC	1	0VDC
2	0VDC	3	0VDC
4	0VDC	5	0VDC
6	0VDC	7	0VDC

◆ **Module Wire Diagram**



◆ **Example**

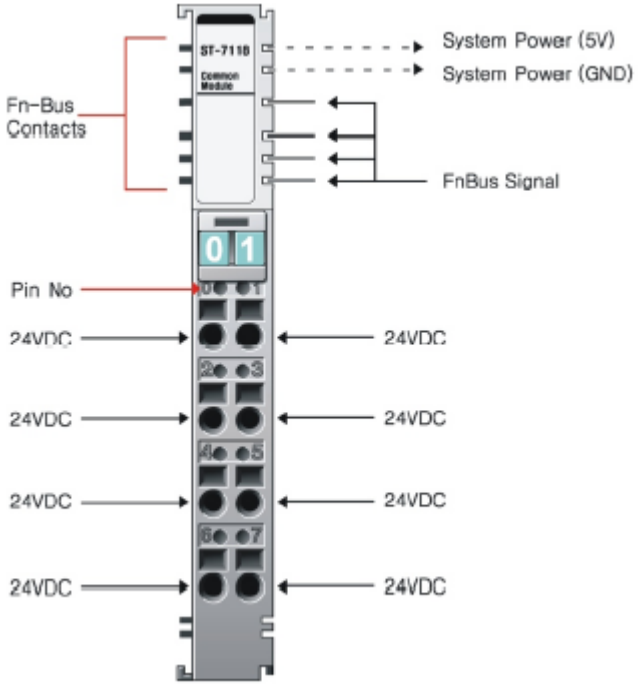
If you have a setup where an external device near the FnIO module needs a ground(0V), you can simply use the ST-7108 as a common module. The ST-7108 provides 0V



3) ST-7118

- Potential Distributor for 24VDC Terminal Type

◆ **Module View**



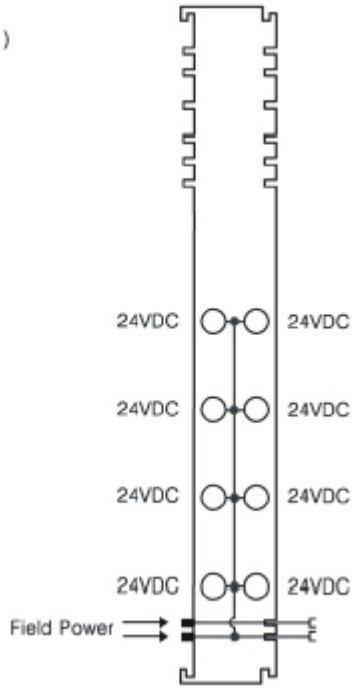
◆ **Specification**

Input Specification	
Field Power Voltage	24Vdc
Indicator	Non Indicate
Field Power Contact Current	Max. 10A
Output Specification	
Power Dissipation	Expansion Power Distributor
Wiring	I/O Cable Max. 2.0㎟(AWG 14)
Weight	65g
Size	12mm × 99mm × 70mm

- Wiring Description

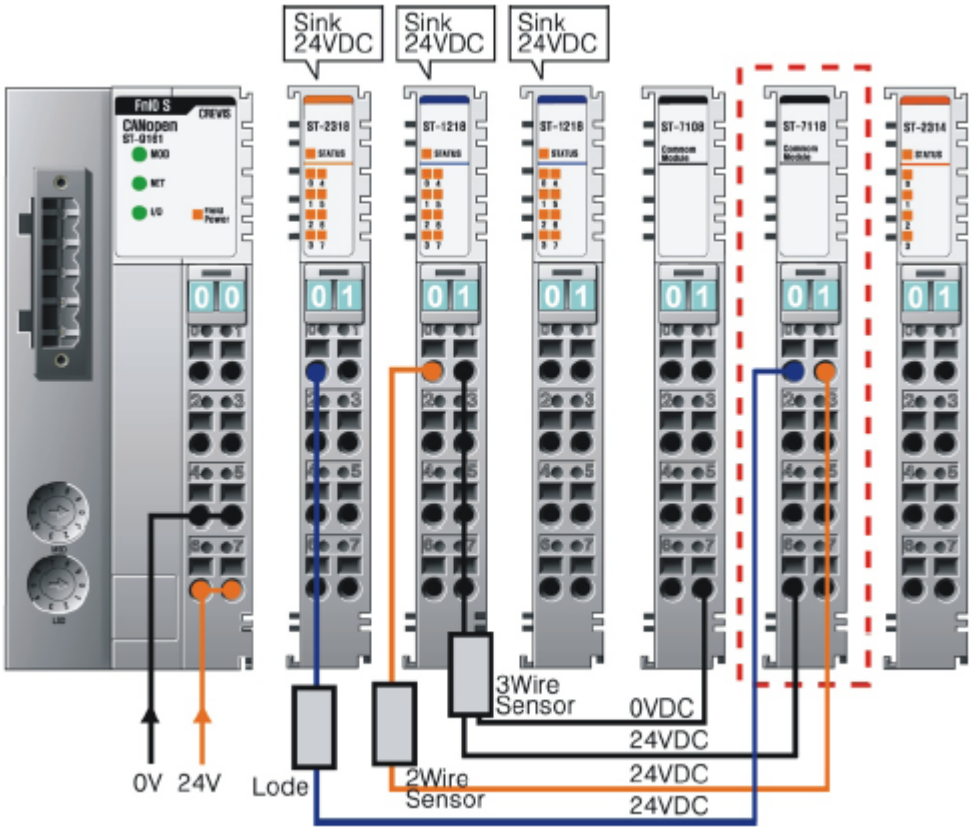
Pin No.	Description	Pin No.	Description
0	24VDC	1	24VDC
2	24VDC	3	24VDC
4	24VDC	5	24VDC
6	24VDC	7	24VDC

◆ **Module Wire Diagram**



◆ **Example**

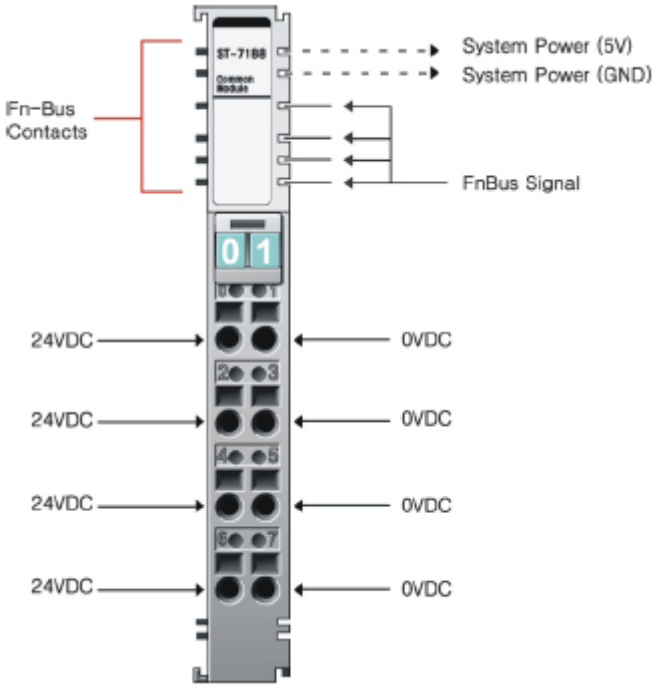
If you have a setup where an external device near the FnIO module needs 24Vdc of power, you can simply use the ST-7118 as a common module. The ST-7118 provides 24Vdc of power



4) ST-7188

- Potential Distributor for 24VDC and 0V Terminal Type

◆ **Module View**



◆ **Specification**

Input Specification	
Field Power Voltage	24Vdc, 0V
Indicator	Non Indicate
Field Power Contact Current	Max. 10A
Output Specification	
Power Dissipation	Expansion Power Distributor
Wiring	I/O Cable Max. 2.0㎟(AWG 14)
Weight	65g
Size	12mm × 99mm × 70mm

- Wiring Description

Pin No.	Description	Pin No.	Description
0	24VDC	1	0VDC
2	24VDC	3	0VDC
4	24VDC	5	0VDC
6	24VDC	7	0VDC

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